


International Workshop on Energy Efficiency Services Industry Shanghai, China



Japanese Energy Efficiency Services Industry: Progress to Date and Role of Trade Association

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Overview of Presentation



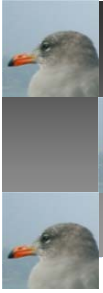
- ◆ Background of ESCO Business in Japan
- ◆ Overview of Japanese ESCO Business
- ◆ Market Barriers
- ◆ Role and Activities of JAESCO to assist ESCO industry development



Definition of ESCO in Japan



- We referenced to the traditional ESCO business model in the USA
- However, utility restructuring in Japan has happened in a limited way so energy service businesses have not developed as diversely as in the USA
- Our ESCOs offer comprehensive services related to improving energy efficiency, including financing with performance contracts
- Japan views ESCOs as a new business model that can implement energy efficiency retrofits of existing buildings



Background of the ESCO business(1)



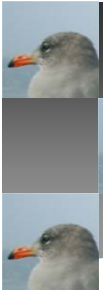
1996: METI set up the Advisory Committee on ESCO Investigation

1997: Kyoto Protocol from COP3

1997: ECCJ formed the Association for ESCO Business Introduction in Japan

1998: ECCJ formed the Committee on ESCO Business Demonstration

1998: METI set up a system of subsidies for energy efficiency retrofits



Background of the ESCO business(2)



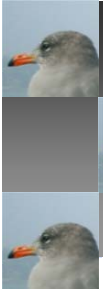
1998: Model energy efficiency retrofit demonstration project carried out by the Committee on ESCO Business Demonstration

May 1998:Law Concerning the Rational Use of Energy revised

October 1998:Law Concerning the Promotion of Measures to Cope with Global Warming enacted

1999: ECCJ formed the Committee to Investigate Measurement and Verification Methods

June 1999:New Japanese Appliance Energy Efficiency Standards enacted



Background of the ESCO business(3)



July 1999: Law for Private Finance Initiative (LPFI)
enacted

October 1999: JAESCO formed

May 2000: Law Concerning the Promotion of
Procurement of Eco-Friendly Goods and Services by
the State and Other Entities (Law on Promoting
Green Purchasing) enacted

April 2003: Energy Conservation Law revised



Subsidy Program



<Subsidy Programs for energy efficiency retrofits>

- pioneering model project to introduce equipment with rational use of energy(\$94.9 M)
- project to introduce and promote high energy efficient system in residence and buildings (\$25.4 M)
- local energy-saving diffusion-and-promotion project (\$23.4 M)



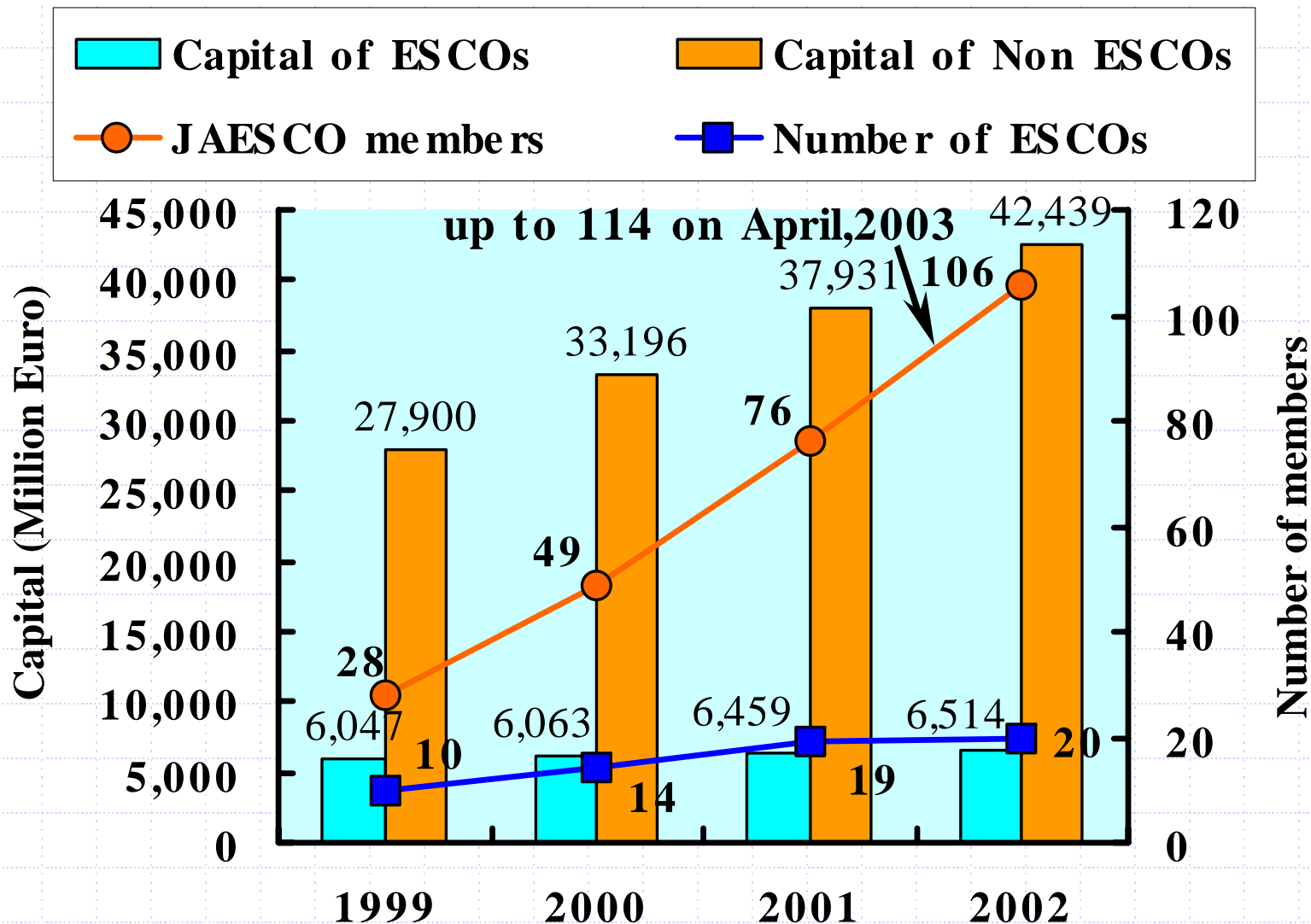
- spread of building and energy management systems (\$30 M)

<Research for local authorities>

- the local energy-saving planning(\$8.5 M)

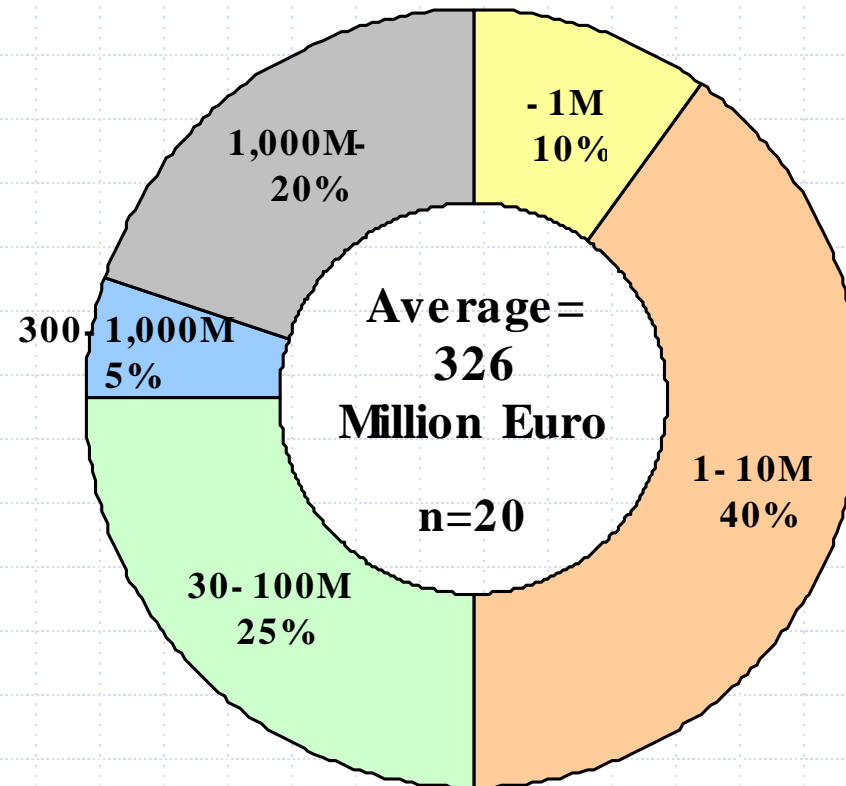


Number of JAESCO members and total capital



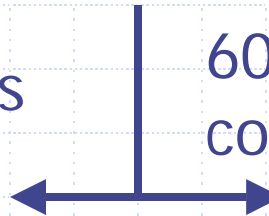


Capital distribution of ESCOs

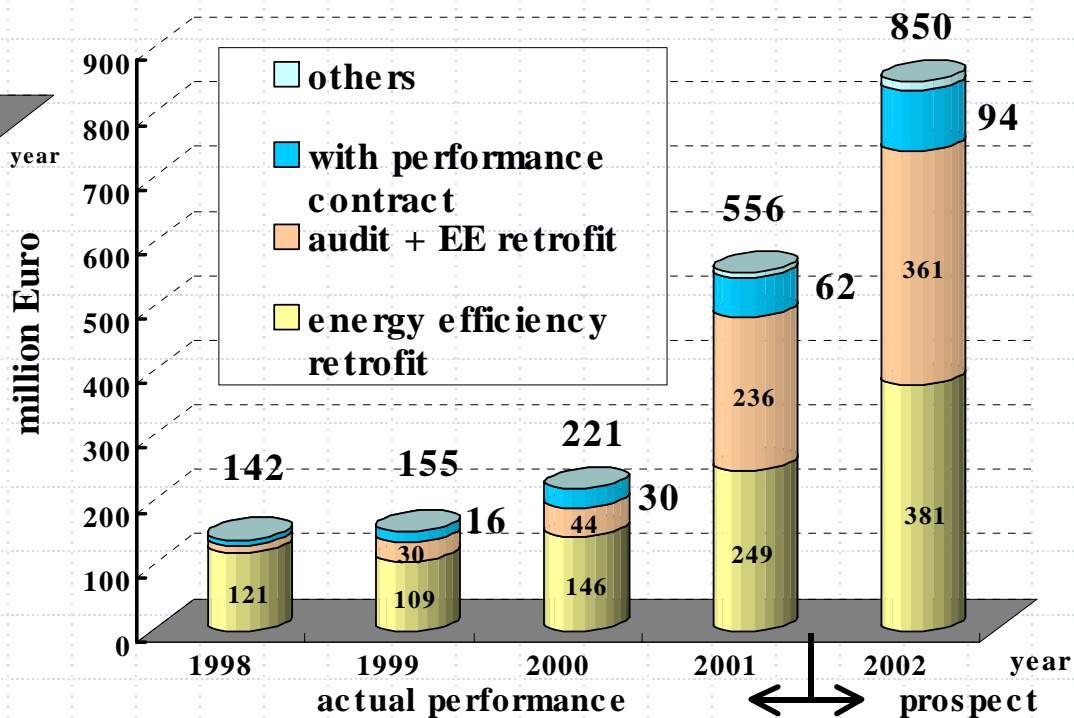
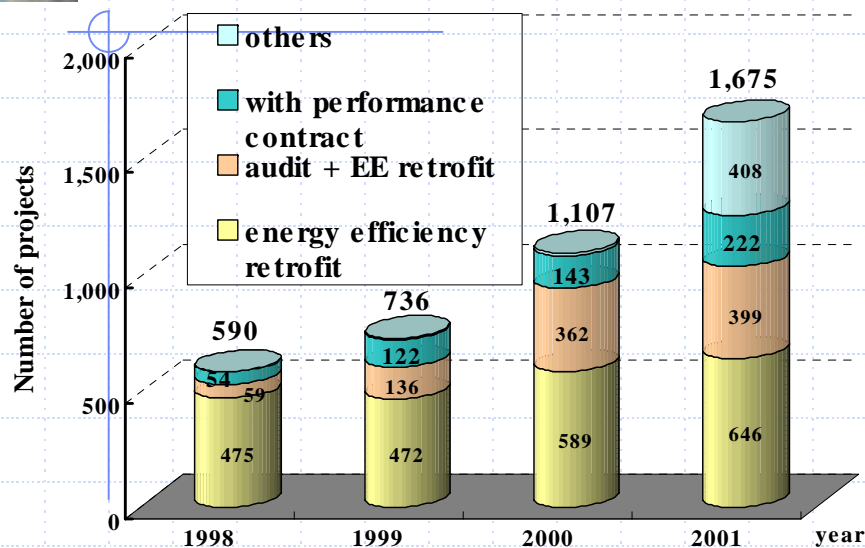


large companies

60% are subsidiary of large companies

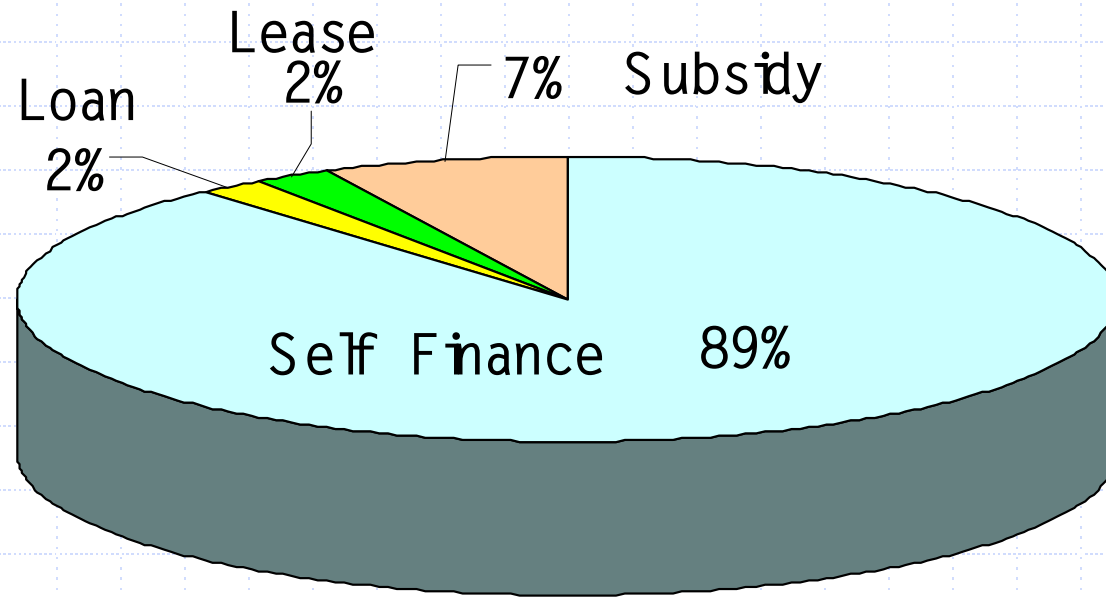


Market size of ESCO business





Source of fund for energy efficiency retrofits



- Afford to execute energy efficiency retrofits are limited to the wealthy ones
- Financial environment for energy efficiency retrofits lags behind



Public sector actions



- Central government and local authorities facilities are thought to be the largest future market for ESCO business
- There are currently fewer than 20 projects with results for local authorities and there are no projects at facilities of the central government
- We developed scheme for execute performance contract to local authorities under current administrative system, but not yet for central government



Market barriers/Low recognition for ESCO business



- ESCO business offers many varied services
- Most organizations budget on a single-fiscal-year basis, so in order to arrange investment conditions the recognition and consent of many superiors is needed
- If facility manager is to carry out ESCO business, he or she must explain the new business model called ESCO to many bosses and receive their understanding and approval (Top sales is needed)
- JAESCO is conducting activities to raise the level of awareness
- Recognition for ESCO model are rising, now



Market Barriers/ Unavailability of project finance



- Mainly asset-based or credit based (corporate finance)

- <financial institutions>

- Do not have proper understanding of ESCO performance contracts

- Do not have enough experiences on the small size project finance to such as ESCO projects

- <we need>

- Project finance or limited recourse financing is indispensable for future ESCO business in Japan



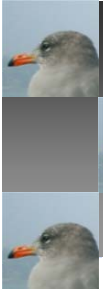
Market barriers/Issues of application to local authorities



- Budgeting for hiring technical experts for preliminary studies(FS) and the growth of organizations that can offer these services are needed

In the case of free information offered by ESCOs,in loss of transparency and fairness

- Energy costs, construction costs, and ESCO service fees are all in separate budget categories
- If a loss occurs a penalty is assessed but if the profit is larger than forecasted the bonus is not returned to the ESCO



Role of JAESCO



- Market promotion of ESCO business
- Provide information on ESCO business and facilitate communication among members
- Research and development support for energy efficiency technologies related to ESCO business
- Accreditation program for ESCOs
- Mediation for dispute settlements about ESCO business



Activities of JAESCO



- News letter
- Annual Conference
- Seminar for JAESCO members
- Display for exhibition and Vendor showcase
- Dispatch lecturer for ESCO seminars
- Organize and lead ESCO study missions to U.S. and Europe
- Examine how to adapt ESCO scheme to government's facilities
- Accredite ESCOs with a quality (under examination)



Conclusion(1)



- It has been 7 years since the approach toward the ESCO business in Japan started in 1996
- Increasing number of companies have entered the ESCO business; participation from large companies
- The ESCO business is drawing attention gradually, and is also expanding the market with strengthening of governmental support



Conclusion(2)



- Kyoto Protocol ratification is a driver for Japan to promote energy saving measures
- The ESCO business is expected to play one of the important roles with government's countermeasures against global warming
- There still remain big problems to be solved, such as energy efficiency finance and administrative procedures

probably, we will be
OK !!





Suggestion for China

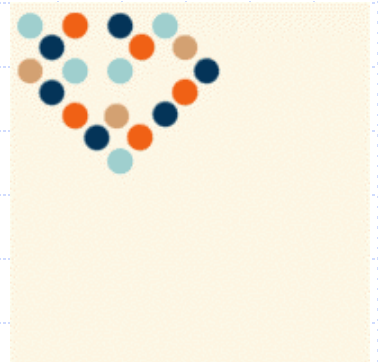


- Do not expect high profitability to ESCO business
- However, ESCO is respectable business
- Keep traditional ESCO concept until market reliability is gained(performance contract base energy efficiency services)
- Develop Government's market
- Gain Governmental support
- Provide more energy efficiency financing
- Learn from U.S. ,European and Japanese experience



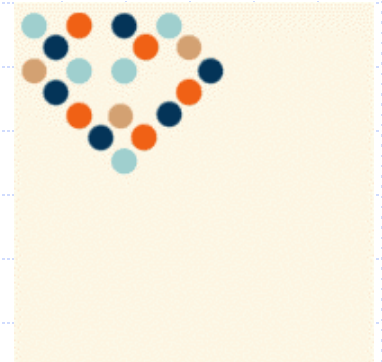
**Thank You for
Listening !**

<http://www.jyuri.co.jp>





Background Slides





Feature of JAESCO Members



- Most are existing large companies aiming at entering the new field
 - average capital:\$688 million
 - up to 25%: exceeding \$1,000 million
 - most utilities have joined JAESCO
- 34% are less than \$10 million
 - 40% are ESCOs which included subsidiaries of large companies



Private Sector Actions



1996: Only One ESCO

1999: JAESCO established with about 16 members

2001: Market size of EE Retrofits = ~\$556 M

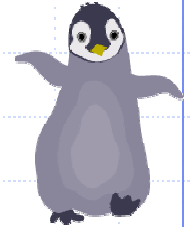
Market size of Perf. Contracting (PC) = ~\$62 M

2002: About 30 companies that call themselves ESCOs;

20 ESCOs with experience in Perf. Contracting

2003: 58 companies that call themselves ESCOs

XX ESCOs with experience in PC business





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Procure both energy supply & ESCO services from an ESCO



- ESCO business must pay for itself within the range of current utility costs
- ESCO service costs as allocated to the budget line item of current energy costs
- Integration of costs into one budget line item will be...
 - Becomes possible to divert between energy costs and service costs
 - Becomes possible to pay bonus to ESCO
 - Effective in simplifying budget procedures
 - Avoids problems that arise due to two different officers paid ESCO service costs and energy costs